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NOISE ASSESSMENT STUDY
FOR THE PLANNED

ABC LEARNING MONTESSORI DAY CARE

2510 KLEIN ROAD, SAN JOSE

Prepared for
ABC Learning Montessori

Prepared by
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March 17, 2015
Project No. 47-006

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I. Executive Summary

This report presents the results of a noise assessment study, in compliance with the California Environmental Quality Act, for the proposed ABC Learning Montessori Day Care at 2510 Klein Road in San Jose. This study includes an analysis of traffic noise impacts to the day care, project-generated traffic noise impacts to the existing roadway system in the vicinity of the day care, and day care operations and activities noise impacts to the residences to the south, east and north of the site.

The plans for the day care include rezoning of the site, renovation and additions of the existing structure, paving and landscaping. The playground areas will be located along the easterly side of the site, extending from the south property line to the north property line, and will be mostly turf areas. There will be little hardscape play area. The play areas will contain no elevated apparatus, such as play structures or basketball courts. Student drop-off/pick-up will be part of the parking analysis as parents will typically park their cars and walk the children to and from the day care to their vehicles.

The following report includes background information on acoustics, noise standards applicable to the project, existing and future noise exposure impacts to the project, project-generated noise impacts, project construction noise impacts and mitigation measures for noise impacted residential receptor locations. Noise impacts from the project are evaluated against the City of San Jose noise limits established in the General Plan and Zoning Ordinance. For purposes of environmental review under CEQA, conformance to General Plan policies reduces any potential noise impacts from a project to a less than significant level. The results of this study reveal that the noise exposures at the site are within the limits of the City of San Jose General Plan Noise Element for day care land use compatibility. There will be no noise impacts to the project. Project-generated noise will occur from parking lot activity, playground activity and from temporary construction of the project. Project-generated traffic and parking operations will be within the limits of the City of San Jose Noise Element, but will exceed the limits of the Zoning Ordinance standards. Play area noise will exceed the limit of the Noise Element and Zoning Ordinance standards. The project will result in significant noise impacts to the single-family homes adjacent to the site to the south, east and north.

In terms of the CEQA compliance checklist, the project indicates the following:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Significant
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	No impact
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Significant
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Significant
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	No impact
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	No impact

II. Background Information on Acoustics

Noise is defined as unwanted sound. Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dB) with 0 dB corresponding roughly to the threshold of hearing.

Most of the sounds which we hear in our normal environment do not consist of a single frequency, but rather a broad range of frequencies. As humans do not have perfect hearing, environmental sound measuring instruments have an electrical filter built in so that the instrument's detector replicates human hearing. This filter is called the "A-weighting" network and filters out low and very high frequencies. All environmental noise is reported in terms of A-weighted decibels, notated as “dBA”. All sound levels used in this report are A-weighted unless otherwise noted. Table I, below, shows the typical human response and noise sources for A-weighted noise levels.

TABLE I

The A-Weighted Decibel Scale, Human Response, and Common Noise Sources

Noise Level, dBA	Human Response	Noise Source
120-150+	Painfully Loud	Sonic Boom (140 dBA)
100-120	Physical Discomfort	Motorcycle at 20 ft. (110 dBA) Nightclub Music (105 dBA)
70-100	Annoying	Diesel Pump at 100 ft. (95 dBA) Freight Train at 50 ft. (90 dBA) Food Blender (90 dBA) Jet Plane at 1000 ft. (85 dBA) Freeway at 50 ft. (80 dBA) Alarm Clock (80 dBA)
50-70	Intrusive	Average Traffic at 100 ft. (70 dBA) Pass. Car, 30 mph @ 25 ft. (65 dBA) Vacuum Cleaner (60 dBA) Suburban Background (55 dBA)
0-50	Quiet	Normal Conversation (50 dBA) Light Traffic at 100 ft. (45 dBA) Refrigerator (45 dBA) Desktop Computer (40 dBA) Whispering (35 dBA) Leaves Rustling (20 dBA) Threshold of Hearing (0 dBA)

Although the A-weighted noise level may adequately indicate the level of noise at any instant in time, community noise levels vary continuously. Most environmental noise includes a mixture of noise from distant sources that create a relatively steady background noise from which no particular source is identifiable. To describe the time-varying character of environmental noise, the statistical noise descriptors, L_1, L_{10}, L_{50} and L_{90} are often used. They are the A-weighted noise levels exceeded for 1%, 10%, 50% and 90% of a stated time period. The continuous equivalent-energy level (L_{eq}) is that level of a steady state noise which has the same sound energy as a time-varying noise. It is often considered the average noise level and is used to calculate the Day-Night Levels (DNL) and the Community Noise Equivalent Level (CNEL) described below.

In determining the daily level of environmental noise, it is important to account for the difference in response of people to daytime and nighttime noises. During the nighttime, exterior background noises are generally lower than the daytime levels. However, most household noise also decreases at night and exterior noise becomes very noticeable. Further, most people sleep at night and are very sensitive to noise intrusion. To account for human sensitivity to nighttime noise levels, the Day-Night Level (DNL) noise descriptor was developed. The DNL is also called the L_{dn}. Either is acceptable, however, DNL is more popular worldwide. The DNL divides the 24-hour day into the daytime period of 7:00 a.m. to 10:00 p.m. and the nighttime period of 10:00 p.m. to 7:00 a.m. The nighttime noise levels are penalized by 10 dB to account for the greater sensitivity to noise at night. The Community Noise Equivalent Level (CNEL) is another 24-hour average which includes a 5 dB evening (7:00 p.m. - 10:00 p.m.) penalty and a 10 dB nighttime penalty. Both the DNL and the CNEL average the daytime, evening and nighttime noise levels over a 24-hour period to attain a single digit *noise exposure*. The proper notations for the Day-Night Level and the Community Noise Equivalent Level are dB DNL and dB CNEL, respectively, as they can only be calculated using A-weighted decibels. It is, therefore, considered redundant to notate dB(A) DNL or dB(A) CNEL.

The effects of noise on people can be listed in three general categories:

- subjective effects of annoyance, nuisance, dissatisfaction;
- interference with activities such as speech, sleep, learning, relaxing;
- physiological effects such as startling, hearing loss.

The levels associated with environmental noise, in almost every case, produce effects only in the first two categories. Workers in industrial plants, airports, etc., can experience noise in the last category. Unfortunately, there is, as yet, no completely satisfactory way to measure the subjective effects of noise, or of the corresponding reactions of annoyance and dissatisfaction. This is primarily due to the wide variation in individual thresholds of annoyance and differing individual past experiences with noise.

Thus, an important way to determine a person's subjective reaction to a new noise is to compare it to the existing environment to which one has adapted, i.e., the "ambient". In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will be judged by the receivers.

With regard to increases in A-weighted noise levels, the Environmental Protection Agency has determined the following relationships that will be helpful in understanding this report.

- Except in carefully controlled laboratory experiments, a change of 1 dB cannot be perceived.
- Outside of the laboratory, a 3 dB change is considered a just-perceptible difference.
- A change in level of at least 5 dB is required before any noticeable change in community response would be expected.
- A 10 dB change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse change in community response.

The adding or subtracting of sound levels is not simply arithmetic. The sound levels, in decibels, must be converted to Bels, the anti-log's of which are then calculated. The manipulation is then performed (arithmetic addition or subtraction), the logarithm of the sum or difference is calculated. The final number is then multiplied by 10 to convert Bels to decibels. The formula for adding decibels is as follows:

$$\text{Sum} = 10\log(10^{SL/10} + 10^{SL/10}) \qquad \text{where, SL is the Sound Level in decibels.}$$

For example, 60 dB + 60 dB = 63 dB, and 60 dB + 50 dB = 60 dB. Two sound sources of the same level are barely noisier than just one of the sources by itself. When one source is 10 dB higher than the other, the less noisy source does not add to the noisier source.

III. Noise Standards, Goals & Policies

A. City of San Jose General Plan

The noise assessment results presented in the findings were evaluated against the City of San Jose Noise Element of the General Plan standards, Ref. (a), which utilize the Day-Night Level (DNL) 24-hour noise descriptor. Per GP Policy EC-1.3, new non-residential land use project-generated noise exposures are limited to 55 dB DNL at the property line when adjacent to noise sensitive residential or public land uses. The Noise Element also quantifies substantial noise increases for the determination of significant noise impacts related to CEQA. CEQA increases allowed are: less than 5 dB where the noise exposure remains Normally Acceptable (55 dB DNL); less than 3 dB where the noise exposure equals or exceeds the Normally Acceptable level, as stated in GP Policy EC-1.2.

For day care land uses, the Noise Element defines the "Normally Acceptable" noise environment up to 60 dB DNL, as shown in GP Policy EC-1. Exterior noise environments for day care facilities between 60 dB DNL and 75 dB DNL are "Conditionally Acceptable", i.e., the specified land use may be permitted only after detailed analysis of the noise reduction requirements and needed noise insulation features included in the design.

B. City of San Jose Zoning Ordinance

The project-generated noise levels were also evaluated against the standards of the City of San Jose Zoning Ordinance, Ref. (b), which limits short-term noise levels to 55 dBA. The Zoning Ordinance specifies a "maximum" sound level limit.

C. California Environmental Quality Act (CEQA)

The project-generated noise exposures were evaluated against the guidelines of the California Environmental Quality Act (CEQA). CEQA does not limit noise levels or noise exposures nor does it quantify noise exposure or noise level increases over the ambient to define noise impacts. CEQA evaluates a project as a significant noise impact if it "...caused a substantial increases in the ambient noise levels...". The quantification of the threshold of significance is left up to the local jurisdiction. The City of San Jose Noise Element provides thresholds of significance in the General Plan. The thresholds of significance shall be applied at the existing residential area to the west and south of the site.

The City of San Jose General Plan Policy EC-1.2 state that significant noise impacts would occur if a project would:

- Cause the DNL at noise sensitive receptors to increase by five dB DNL or more where the noise levels would remain "Normally Acceptable"; or

- Cause the DNL at noise sensitive receptors to increase by three dB DNL or more where the noise levels equal or exceed the "Normally Acceptable" level.

If the project causes either of the above criteria to occur, the project will be considered a significant noise impact to the areas where it occurs and mitigation measures will be required. Table I summarizes the quantitative noise limits applied on the residential side of the property lines at the first floor elevations.

TABLE I	
Project-Generated Noise Limits	
Noise Element EC-1.3	55 dB DNL
Noise Element EC-1.2 (based on ambient +3)	53 dB DNL @ South Property Line
Noise Element EC-1.2 (based on ambient +5)	52 dB DNL at East and North Property Lines
Zoning Ordinance	55 dBA

IV. Acoustical Setting

A. Site and Noise Source Descriptions

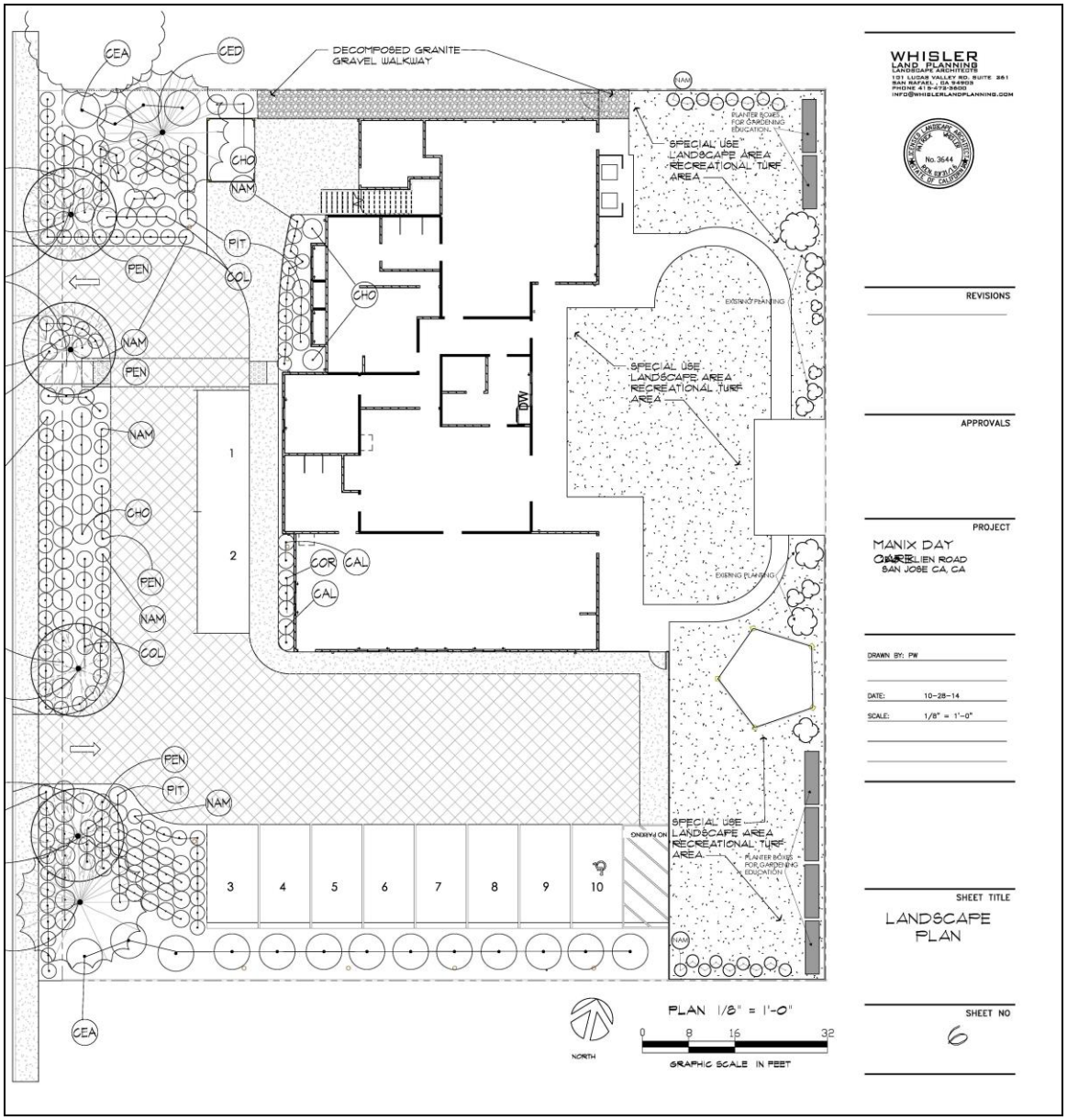
The planned development site is located at 2510 Klein Road along the east side of the street, just south of Murillo Avenue in the eastern foothills of San Jose. The site slopes up slightly to the east, as do the parcels immediately adjacent to the south and north. The site also slopes down slightly to the south. The parcels to the east of the site are approximately 4 ft. above the grades of the homes along Klein Road. The site currently contains a single-family, single-story home. Surrounding land-uses are two-story single-family residences.

The primary source of noise at the site is traffic on Murillo Avenue and Klein Road. Both roadways are relatively minor streets with sparse traffic. Klein Road carries an existing Average Daily Traffic (ADT) volume of 910 vehicles, as reported by the consulting traffic engineer, Ref. (c).

B. Project Description

The planned project, as shown on the Landscape Plan, Ref. (d), includes the renovation of the existing structure to create a new two-story day care center building. A 10 space (including 1 handicapped space) parking area will be located along the southerly boundary of the site. Two parking spaces will be located in the front of the building. The play areas will consist of three turf areas along the easterly side of the site. Drop-off and pick-up will take place at the front of the building. However, for most day-care centers, parents park their cars and walk the children into the center, then exit the site approximately 5 minutes later. The current Landscape Plan is shown as Figure 1 on page 10.

The ABC Learning Montessori day care is projected to have 68 students ranging in age from 2 to 5 years old. Operational hours of the center will be 7:00 AM to 6:00 PM. Outdoor activity times will be from 10:00 AM – 11:20 AM and from 2:45 PM to 4:05 PM. A maximum of 25 students will be outdoors at any given time of the activity period, as reported by ABC Learning Montessori, Ref. (e).


DECOMPOSED GRANITE GRAVEL WALKWAY
SPECIAL USE LANDSCAPE AREA RECREATIONAL TURF AREA
PLANTER BOXES FOR GARDENING EDUCATION
EXISTING PLANTING
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GRAPHIC SCALE IN FEET
NORTH
WHISLER
LAND PLANNING
LANDSCAPE ARCHITECTS
101 LUCAS VALLEY RD. SUITE 261
SAN RAFAEL, CA 94903
PHONE 415-472-2600
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No. 3644
REVISIONS
APPROVALS
PROJECT
MANIX DAY
CARLIEN ROAD
SAN JOSE CA, CA
DRAWN BY: PW
DATE: 10-28-14
SCALE: 1/8" = 1'-0"
SHEET TITLE
LANDSCAPE PLAN
SHEET NO
6

FIGURE 1

V. Existing and Future Noise Environments (Without the Project)

A. Existing Noise Levels

To determine the existing noise environment at the site, continuous recordings of the sound levels were made on-site at three locations. Location 1 was along the southerly property line of the site. Location 2 was along the easterly property line of the site. Location 3 was along the northerly property line of the site. The measurement locations are shown on Figure 2 on page 12. The measurements were made on January 21-22, 2015 for a continuous period of 24 hours at each location and included measurements during the daytime and nighttime periods of the DNL index. The on-site sound levels were recorded and analyzed using Larson-Davis Model 812 Precision Integrating Sound Level Meters. The meters yield, by direct readout, a series of descriptors of the sound levels versus time, which include the L_1, L_{10}, L_{50}, and L_{90}, i.e., those levels that are exceeded 1%, 10%, 50%, and 90% of the time. The meters also yield the maximum and minimum levels, and the continuous equivalent-energy levels (L_{eq}), which are used to calculate the DNL. The measured L_{eq}'s are shown in the data tables in Appendix C.

The L_{eq}'s at measurement Location 1 along the south property line ranged from 43.6 to 59.0 dBA during the daytime and from 34.6 to 47.8 dBA at night. During the operational hours of 7:00 AM to 6:00 PM, the L_{eq}'s ranged from 44.4 to 59.0 dBA.

The L_{eq}'s at measurement Location 2 along the east property line ranged from 42.5 to 51.9 dBA during the daytime and from 33.1 to 46.3 dBA at night. During the operational hours of 7:00 AM to 6:00 PM, the L_{eq}'s ranged from 43.4 to 51.9 dBA.

The L_{eq}'s at measurement Location 3 along the north property line ranged from 41.9 to 53.3 dBA during the daytime and from 31.9 to 45.7 dBA at night. During the operational hours of 7:00 AM to 6:00 PM, the L_{eq}'s ranged from 43.0 to 52.8 dBA.

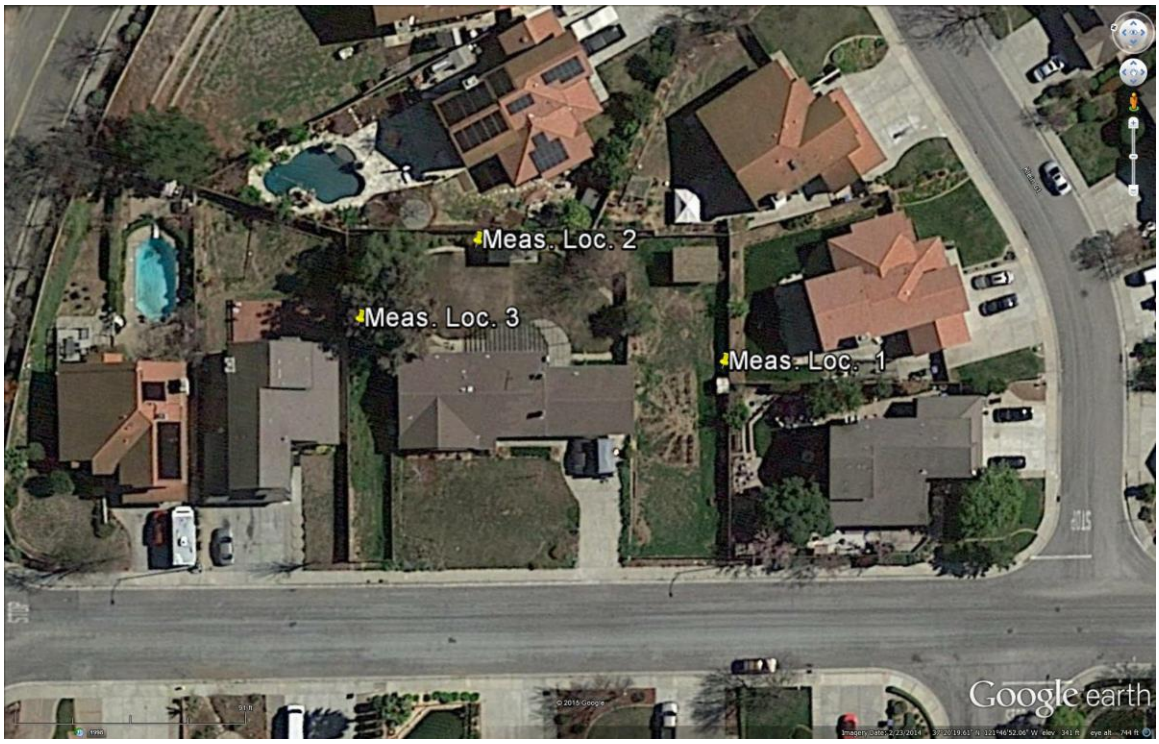

FIGURE 2

B. <u>Existing and Future Noise Exposures</u>

To evaluate the noise exposure impacts to the project site, the DNL's for the survey locations were calculated by decibel averaging of the L_{eq}'s as they apply to the daily time periods of the DNL index. A 10 decibel nighttime weighting factor was applied and the DNL was calculated using the formula shown in Appendix B. The measured L_{eq}'s and DNL calculations are shown in the data tables in Appendix C.

The results of the calculations indicate that the noise exposure at measurement Location 1 along the south property line is 51 dB DNL.

The noise exposure at measurement Location 2 along east property line is 49 dB DNL

The noise exposure at measurement Location 3 along north property line is 49 dB DNL

Due to the buildout of the area, the future noise exposures at the site are expected to remain similar to current levels.

VI. Noise Impacts

A. Impacts to the Project

The City of San Jose General Plan specifies land use compatibility guidelines for institutional uses. The "Normally Acceptable" noise exposure standard is 60 dB DNL.

The noise exposures at the site are well below the 60 dB DNL Normally Acceptable limit for day care facilities. Therefore, the noise impacts to the project are within the limits of the standards and are less than significant in terms of CEQA.

Impact: Less Than Significant

B. Project-Generated Noise Impacts

Potential noise impacts from the project to the area surrounding the proposed day care will include project-generated traffic, parking lot noise (parking and drop-off/pick-up), playground activity and construction of the project. Mechanical equipment associated with building services may produce noise at the residential areas as well. Detailed plans for the day care buildings are unavailable at this time. Therefore, an analysis of mechanical equipment could not be performed. There are no other significant outdoor sources of noise that are associated with the day care.

Project Traffic Noise Analysis

Project traffic noise on the local street system will be less than significant as the total daily volume of day care traffic will be a small percentage of the daily traffic volumes on the local roadways. Day care traffic noise will add 1 decibel to the existing traffic noise levels in the area. Noise mitigation measures for day care traffic noise will not be required.

The impact of project traffic was determined from traffic volume data provided in the Traffic Impact Analysis. The existing traffic volume on Klein Road is 910 vehicles ADT. The project is expected to add 141 vehicles on Klein Road to the south of the site and 141 vehicles on Klein Road to the north of the site The noise exposure was calculated to be 53 dB DNL for a traffic volume of 910 vehicles at 25 mph and 25 ft. from the centerline of the street.

The total traffic volume was calculated to be 1,051 vehicles ADT on Klein Road to both the north and to the south.

The increase in the traffic noise is calculated by the formula:

$\Delta dB = 10\log_{10}(1{,}051/910) = 0.63$ dB.

The project is expected to add 1 decibel to the existing traffic noise environment at the front property lines of the homes along Klein Road to both the north and south of the site. The combined noise exposure will be 54 dB DNL. Thus, the noise exposures will remain within the standards of the City of San Jose Noise Element and the increase in traffic noise will be less than significant.

Impact: Less Than Significant

Parking Lot and Drop-off/Pick-up Noise

The planned day-care center parking lot and drop-off/pick-up noise is analyzed differently than a standard school. The day care center drop-off and pick-ups are assumed to have the parents park their cars and walk the children into the facility rather than the parents pulling up to the drop-off area and loading/unloading the children then driving away.

The traffic study indicates that there will be 29 AM peak hour inbound trips, which would include 4 staff vehicles entering the site and parking but not exiting and 25 outbound trips. The PM peak hour would have 25 inbound trips plus the 4 staff vehicles exiting to total 29 outbound trips. The traffic study also includes 39 inbound and outbound trips throughout the remainder of the day.

This analysis assumes that the staff will park in parking spaces 6-9 and will park in the AM hour but not exit. The staff vehicles will exit during the PM hour. Parents will use spaces 1 and 2 at the front of the school and spaces 3-5 along the south property line. Each car driving onto the site and pulling into parking spaces 3-9 takes 7 to 13 seconds perform its operation, which includes the opening and closing of two doors. The exit operation takes approximately 15 seconds which includes noise from the doors opening and closing, starting the engine and pulling out. The parking operations for spaces 1 and 2 will take 6 seconds and 8 seconds, respectively. Exiting from these two spaces will take 8 and 10 seconds, respectively. The 5 parent parking spaces are assumed to turn over five times (25 trips) during the AM and PM peak hours. The remaining daily trips are assumed to be 10 trips during each of four hours.

Table II on page 16 provides the analysis of the parking, drop-off/pick-up operations over the course of the day. The table shows the amount of time for each operation, the average sound level over the duration of the operation and the distance from the source at its most significant location to the south property line. Note that analyses for the east and north property lines were not performed as the parking area is too far to these locations to be a concern.

Table II also provides the hourly average ($L_{eq(h)}$) noise levels, which are used to calculate the DNL's. The project-generated noise exposure of 50 dB DNL is shown at the bottom of the chart. The noise exposure generated by the parking, drop-off/pick-up operations will be within the 55 dB DNL limit of the City of San Jose Noise Element standards and will add 3 dB to the existing noise environment at the south property line. This increase in the noise exposure is less than significant.

The results of the analysis indicate that the parking, drop-off/pick-up operations could be up to 64 dBA at the south property line. Thus, the noise levels could be up to 9 dB in excess of the 55 dBA limit of the City of San Jose Zoning Ordinance standards. This is a significant impact.

Impact: Significant.

TABLE II

Parking Operations - South Property Line Receptor					
South Parking Strip					
Morning Peak	Parking		Exiting		
Space	Time, sec.	dBA	Time, sec.	dBA	Dist., ft.
Staff Parking					
6	10	57			23
7	11	57			23
8	12	57			23
9	13	57			23
Parent Parking x 5					
3	35	57	75	64	23
4	40	57	75	64	23
5	45	57	75	64	23
1	30	53	40	57	44
2	50	50	30	54	64
	Leq(h)=	**50**		**60**	
Afternoon Peak					
Staff Parking					
6			15	64	23
7			15	64	23
8			15	64	23
9			15	64	23
Parent Parking x 5					
3	35	57	75	64	23
4	40	57	75	64	23
5	45	57	75	64	23
1	30	53	40	57	44
2	40	50	50	54	64
	Leq(h)=	**49**		**59**	
Residual Visitors x 2.5					
3	15	57	37.5	64	23
4	20	57	37.5	64	23
1	15	53	20	57	44
2	20	50	25	54	64
	Leq(h)=	**42**		**52**	
DNL =	**50 dB**				

Playground Noise Impacts

Noise from playground activity was determined from past noise studies of similar facilities in the area, Ref's (f, g, h). The reference facilities contained similar play environments for the age groups corresponding to the ABC Learning Montessori project.

Table VII provides the reference sound levels for each age group, the number of children at play, the distance to the center of the play area and the name of the facility. Note that the noise levels used for this analysis are the energy-averages for each playground scenario over the course of the play time. Since decibels are a logarithmic function (high levels carry more weight), the sound levels shown below and utilized in this study represent the total amount of noise created during the play time integrated over the play time duration.

TABLE III

Children Playing Reference Sound Levels

Sport	# of Children	Age	Dist.	Sound Level	Location
Playground	23	2-3	42	64	A Creative Playschool
Playground	23	4-5	42	66	St. Martin of Tours
Playground	14	3-5	45	53	Most Holy Trinity

The change in overall sound level from a change in the number of children playing is calculated by the formula:

$\Delta dB = 10 \log_{10}(V_1/V_2)$ where, V = the number of children.

The attenuation of sound from children playing is calculated by the formula:

$\Delta dB = 20 \log_{10}(r_1/r_2)$ where, r = the distance from the center of the play area to the measurement or receptor location.

The data acquired at the reference noise study locations reveal that older children make more noise than younger children. The primary sources of noise from children playing are voices.

This analysis divided the number of children outdoors at any given time by three and placed each 1/3 of the group near the center of each of the three turf areas.

ABC Learning Montessori reported that outdoor play activity will be limited to the hours of 10:00 AM to 11:20 AM and from 2:45 to 4:05 PM. There will be four classrooms with 25 three and four year olds in one class, 14 two year olds in another class, 9 two year olds in the third class and 20 four and five year olds in the fourth class. The classes will go outside for a period of 20 minutes sequentially.

Table IV on page 19 provides the analyses of noise generated in the play areas throughout the course of the day at the most impacted residential property lines to the east, south and north. The analyses do not include noise reduction provided by the existing property line fences as the fences contain many gaps resulting in acoustically-ineffective shielding. The table provides the noise levels generated by each 1/3 of the group of children in the play areas during the AM and PM recess periods. Also shown are the distances from the centers of the three areas to each of the three property lines.

Table V on page 20 provides the analysis of the average noise levels for each play scenario, the conversion of the short-term noise level to the hourly average noise levels for each age group for the calculation of the Day-Night Levels. The DNL's are shown at the bottom of the table.

For informational purposes, the L_{max} sound levels recorded during children's play times at the above reference facilities ranged from 66-77 dBA at a normalized distance of 45 ft. from the center of the play area. Since children move around quite a bit during outdoor play, Lmax levels are governed by any given child generating noise at any given location in relation to the receptor property boundary. Therefore, a child screaming or shouting near the property line can generate sound levels well above 70 dBA and possible up to over 80 dBA under the right circumstances. Attempting to mitigate a very high, but very brief sound (the L_{max} is a one second duration) would result in extremely high sound barriers, very large distances or no project.

Applying a “maximum” sound level limit, which has a precise technical definition, would preclude nearly all day-care centers, pre-schools, schools, commercial uses and any other use with outdoor activity near residential land uses. At the site currently, only the hours of midnight and 2:00 AM at the east property line and during the midnight hour at the south property line had maximum noise levels below 55 dBA. The City of San Jose has, in the past, utilized short-term averages, hourly averages and 24-hour averages for the Zoning Ordinance limits under a conditional use permit.

The L_{max} sound levels at the planned project site will range from 65-76 dBA at the north property line, 72-83 dBA at the east property line and 62-73 dBA at the south property line. The necessary noise barriers would need to be 11 ft. high, 31 ft. high and 9 ft. high at the north, east and south property lines respectively, to comply with the Zoning Ordinance standards. These measures are not feasible.

TABLE IV

PLAYGROUND SOUND LEVELS, dBA

				EAST RECEPTOR		SOUTH RECEPTOR		NORTH RECEPTOR	
	# of			Dist., ft.	Leq Sound Level	Dist., ft.	Leq Sound Level	Dist., ft.	Leq Sound Level
Sport	Children	Ages	Playground	Source to PL	@ Prop. Line	Source to PL	@ Prop. Line	Source to PL	@ Prop. Line
Playground 1	4	2	North	48	55	140	46	13	67
Playground 2	5	2	Middle	22	63	96	50	57	55
Playground 3	5	2	South	72	53	26	62	128	48
Playground 1	3	2	North	48	54	140	45	13	65
Playground 2	3	2	Middle	22	61	96	48	57	53
Playground 3	3	2	South	72	50	26	59	128	45
Playground 1	4	3	North	48	55	140	46	13	67
Playground 2	4	3	Middle	22	62	96	49	57	54
Playground 3	4	3	South	72	52	26	61	128	47
Playground 1	4	4	North	48	57	140	48	13	69
Playground 2	5	4	Middle	22	65	96	52	57	57
Playground 3	4	4	South	72	54	26	63	128	49
Playground 1	3	4	North	48	56	140	47	13	67
Playground 2	4	4	Middle	22	64	96	51	57	56
Playground 3	3	4	South	72	52	26	61	128	47
Playground 1	3	5	North	48	56	140	47	13	67
Playground 2	4	5	Middle	22	63	96	51	57	56
Playground 3	3	5	South	72	52	26	61	128	47

The colored bands represent the various age groups of the students.

TABLE V									
PLAYGROUND HOURLY AVERAGE NOISE ANALYSIS									
	EAST PROP LINE			SOUTH PROP LINE			NORTH PROP LINE		
10:00 AM/2:45 PM	Leq	Duration	Leq(h)	Leq	Duration	Leq(h)	Leq	Duration	Leq(h)
3 yo	63	20	58	61	20	56	67	20	62
4 yo	66	20	61	63	20	58	69	20	64
TOTALS =	**68**		**63**	**65**		**60**	**71**		**66**
	EAST PROP LINE			SOUTH PROP LINE			NORTH PROP LINE		
10:20 AM/3:05 PM	Leq	Duration	Leq(h)	Leq	Duration	Leq(h)	Leq	Duration	Leq(h)
2 yo	64	20	59	62	20	57	67	20	62
TOTALS =	**64**		**59**	**62**		**57**	**67**		**62**
	EAST PROP LINE			SOUTH PROP LINE			NORTH PROP LINE		
10:40 AM/3:25 PM	Leq	Duration	Leq(h)	Leq	Duration	Leq(h)	Leq	Duration	Leq(h)
2 yo	62	20	57	60	20	55	66	20	61
TOTALS =	**62**		**57**	**60**		**55**	**66**		**61**
	EAST PROP LINE			SOUTH PROP LINE			NORTH PROP LINE		
11:00 AM/3:45 PM	Leq	Duration	Leq(h)	Leq	Duration	Leq(h)	Leq	Duration	Leq(h)
4 yo	65	20	60	62	20	57	68	20	63
5 yo	64	20	59	62	20	57	68	20	63
TOTALS =	**67**		**63**	**65**		**60**	**71**		**66**
	Highest Leq(h		**65**		**Highest Leq(h) =**	**63**		**Highest Leq(h) =**	**68**
	DNL =	**DNL =**	**56**		**DNL =**	**54**		**DNL =**	**59**

As shown in Table V, the results of the analyses indicate that play area noise will be up to 68 dBA at the east property line, up to 65 dBA at the south property line and up to 71 dBA at the north property line. Thus, the noise levels will be up to 16 dB in excess of the City of San Jose Zoning Ordinance standard of 55 dBA.

Impact: Significant.

Table V also indicates that the play area noise exposures will be up to 56 dB DNL at the east property line, 54 dB DNL at the south property line and 59 dB DNL at the north property line. Thus, the play area noise exposures will be up to 4 dB in excess of the City of San Jose Noise Element standard of 55 dB DNL as established by Policy EC-1.3.

Table VI provides the analysis of the effect of the project playgrounds on the ambient conditions at the property lines.

TABLE VI

Project-generated Noise Exposure Increases

Location	Ambient	Project-generated	Combined	Increase over Ambient
East Property Line	49 dB DNL	56 dB DNL	57 dB DNL	8 dB
South Property Line	51 dB DNL	54 dB DNL	55 dB DNL	4 dB
North Property Line	49 dB DNL	59 dB DNL	59 dB DNL	10 dB

The play area noise exposures will add more than 3 dB to the existing noise environment causing the ambient to exceed 55 dB DNL. This increase exceeds the limit of the City of San Jose Noise Element for noise increases per CEQA and as established by Policy EC-1.2.

Impact: Significant.

Building Services and Mechanical Equipment

Building services and mechanical plans and schedules are not available at the time of this study. An acoustical analysis could not be performed. A potential for noise excesses occurs.

Impact: Potential Significant Noise Impact

Construction Phase Impacts

Short-term construction impacts may be created during construction of the development. Construction equipment generates noise levels in the range of 70 to 90 dBA at a 50 ft. distance from the source, and has a potential to disturb residences in close proximity to the site. The highest noise levels at the residential property boundaries will be up to approximately 82 to 102 dBA at the residences closest to the project site. Hourly average noise levels will range from 70 to 85 dBA L_{eq} with the highest noise levels occurring during grading of the site near the residences. The noise exposures are likely to be up to 77 dB DNL on the noisiest days. Typical noise exposures from construction will be 62-72 dB DNL. This is **a temporary significant impact.**

VII. Mitigation Measures

A. Project-Generated Parking Lot and Playground Noise Impacts

To reduce excess noise in the residential rear and side yards from the parking lot, including drop-offs and pick-ups, and play area activity, the following noise control barriers will be required.

- Construct a 6 ft. high acoustically-effective barrier along the easterly property line on top of the existing retaining wall in the location of the existing property line "good neighbor" fence. Consult with a fencing contractor to determine if the existing fence support structure can be modified to be acoustically-effective, as described below.

- Construct 8 ft. high acoustically-effective barriers at the south and north property lines contiguous with the turf play areas. The barrier height is in reference to the nearest play area ground elevation.

- Construct a 6 ft. high acoustically-effective barrier along the south property line extending from the 8 ft. high barrier at the play area to the landscaped area at the west side of parking space #3. The barrier height is in reference to the nearest parking pad elevation.

Please see Figure 3 for the locations and heights of the recommended noise control barriers.

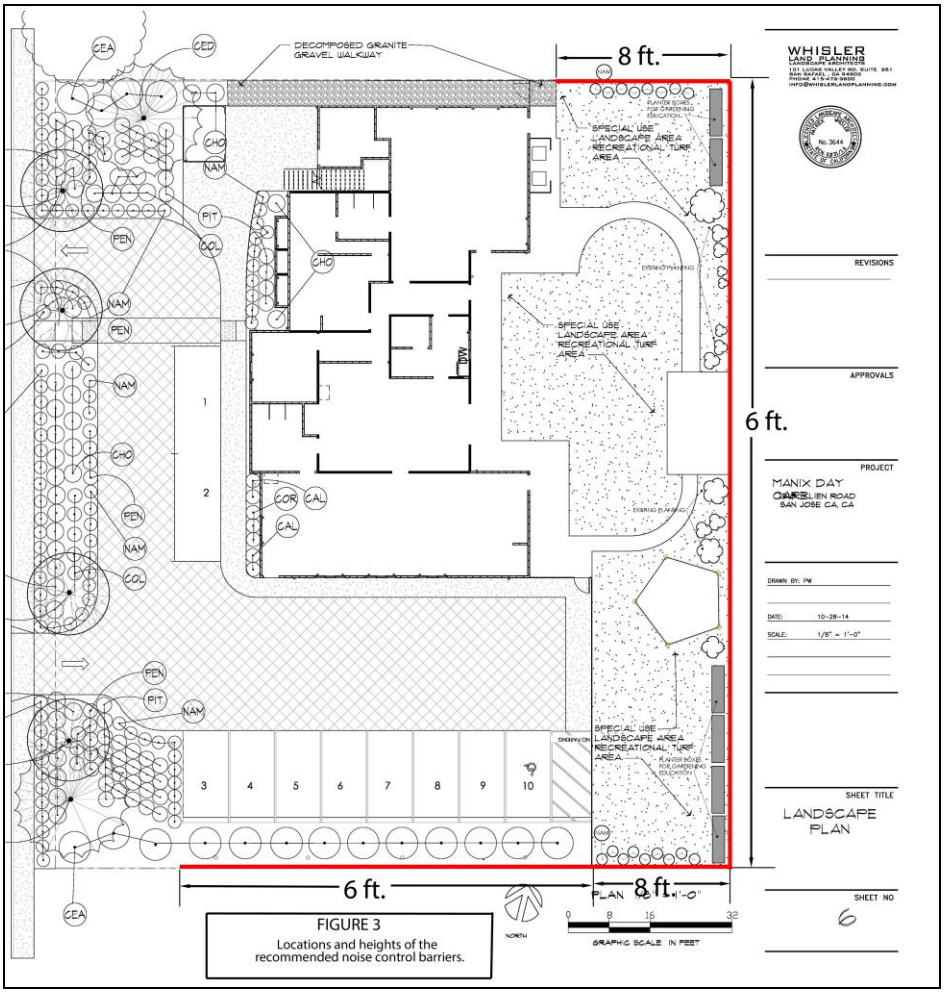

FIGURE 3
Locations and heights of the recommended noise control barriers.

To achieve an acoustically-effective barrier, it must be made air-tight, i.e., without cracks, gaps, or other openings and must provide for long-term durability. The barrier can be constructed of wood, stucco, masonry, earth berm or a combination thereof and must have a minimum surface weight of 2.5 lbs. per sq. ft. If wood fencing is used, homogeneous sheet materials are preferable to conventional wood fencing as the latter has a tendency to warp and form openings with age. However, high quality, air-tight, tongue-and-groove, shiplap, or board and batten construction can be used, provided the minimum surface weight requirement is met and the construction is air-tight. The noise control barriers must be constructed so that all joints, including connections with posts or pilasters are sealed air-tight and no openings are permitted between the upper barrier components and the ground.

The implementation of the above recommended measures will reduce exterior noise exposures to 55 dB DNL or lower and short-term noise levels to 55 dBA or lower in the rear and side yards of the adjacent residences to the south, east and north. Noise increases will be reduced to less than significant for compliance with the standards of the City of San Jose Noise Element, the City of San Jose Zoning Ordinance and CEQA.

B. <u>Mechanical Equipment</u>

- Perform a detailed acoustical analysis of all outdoor mechanical equipment at such time the buildings are designed. Noise mitigation measures shall be included in the design of the mechanical system and/or building for compliance with the noise standard of the City of San Jose Zoning Ordinance.

C. Construction Phase Noise

Mitigation of the construction phase noise at the site can be accomplished by using quiet or "new technology" equipment. The greatest potential for noise abatement of current equipment should be the quieting of exhaust noises by use of improved mufflers. It is recommended that all internal combustion engines used at the project site be equipped with a type of muffler recommended by the vehicle manufacturer. In addition, all equipment should be in good mechanical condition so as to minimize noise created by faulty or poorly maintained engine, drive-train and other components. Construction noise can also be mitigated by the following:

- Construction shall be scheduled in accordance with the requirements of the City of San Jose Municipal Code.
- Utilizing temporary berms or noise barriers, such as lumber or other material stockpiles and construction trailers.
- Stationary equipment, such as compressor and generators shall be housed in acoustical enclosures and placed as far from sensitive receptors as feasible.

VIII. Conclusions

In conclusion, noise impacts to the project will be within the “Normally Acceptable” standard of the City of San Jose Noise Element, per Policy EC-1.

The project-generated traffic noise impacts to the residential areas in the vicinity of the project will be in compliance with the City of San Jose Noise Element and CEQA as project traffic will not add significantly to the noise environment.

Parking lot activity, which includes student drop-offs and pick-ups, will exceed the limits of the City of San Jose Zoning Ordinance, but will be within the limits of the City of San Jose Noise Element. Therefore, this is not a significant impact under CEQA.

Play area noise will exceed the limits of the City of San Jose Noise Element and Zoning Ordinance standards and will cause a significant increase in the existing noise environment at residences immediately adjacent to the site to the east, south and north. Construction noise will generate temporary noise impacts. Therefore, these are potentially significant impacts under CEQA and mitigation measures are recommended for inclusion into the project design to reduce impacts to a less than significant level. The mitigation measures for the noise exposure excesses at the residences for play area noise impacts, for potential mechanical equipment noise impacts and for temporary construction noise impacts are described in Section VII of this report.

The study findings for existing conditions are based on field measurements and other data and are correct to the best of our knowledge. Future noise projections are based on information provided by the project sponsor. Significant deviations in the predicted day care enrollment, site planning, future changes in day care activity levels, noise regulations or other future changes beyond our control may produce long-range noise results different from our estimates.

Report Prepared By:

EDWARD L. PACK ASSOC., INC.

Jeffrey K. Pack
President

APPENDIX A

References

(a) Noise Element of The City of San Jose General Plan, (Envisions San Jose 2040), November 1, 2011

(b) City of San Jose Municipal Code, Title 20, "The Zoning Ordinance", Part 7, Performance Standards, November 29, 2001

(c) "Traffic Operations Analysis for the Proposed Day Care Center at 2510 Klein Road in San Jose, California", by Hexagon Transportation Consultants, Inc., September 16, 2014

(d) Landscape Plan, ABC Learning Montessori, by Whistler Land Planning, October 28, 2014

(e) Information on ABC Learning Montessori Day Care Center Operations Provided by Mr. Kana Manix by email to Edward L. Pack Associates, Inc., January 16-17, 2015

(f) "Noise Assessment Study of the A Creative Playschool Playground Activity, Amador Valley Boulevard, Dublin", by Edward L. Pack Associates, Inc., Project No. 30-011, February 18, 1998

(g) "Noise Assessment Study for the Planned 'Most Holy Trinity Preschool', 2033 Nassau Drive, San Jose", by Edward L. Pack Associates, Inc., Project No. 45-021, June 12, 2013

(j) "Noise Assessment Study for the Planned 'St. Martin of Tours Day-Care Center', 2570 Bailey Avenue, San Jose", by Edward L. Pack Associates, Inc., Project No. 45-041, August 30, 2013

APPENDIX B

Noise Standards, Terminology, Instrumentation,

1. Noise Standards

A. City of San Jose "Noise Element" Standards

The City of San Jose General Plan "Envision San Jose 2040", adopted November 1, 2011, Chapter 3 "Environmental Leadership" contains noise environment goals and policies. The acceptable exterior noise level objective is 60 decibels (dB) Day-Night Level (DNL) or lower for residential and most institutional land uses. The acceptable exterior noise level objective is established for the City, except in the environs of the San Jose International Airport and the Downtown.

Table EC-1: Land Use Compatibility Guidelines for Community Noise Level in San Jose

	EXTERIOR NOISE EXPOSURE (dB DNL)					
Land Use Category	55	60	65	70	75	80
Residential, Hotels and Motels, Hospitals and Residential Care						
Outdoor Sports and Recreation, Neighborhood Parks, Playgrounds						
Schools, Libraries, Museums, Meeting Halls, Churches						
Office Buildings, Business, Commercial and Professional						
Sports Arenas, Outdoor Spectator Sports						
Public and Quasi-Public Auditoriums, Concert Halls, Amphitheaters						

	Normally Acceptable
	Conditionally Acceptable
	Unacceptable

City of San Jose Noise Element (cont'd)

- For new multi-family residential projects and for the residential component of mixed-use development, the 60 dB DNL standard is applied to usable outdoor activity areas, excluding balconies and residential stoops and porches facing existing roadways. Some common areas available to all residents shall meet the 60 dB DNL standard. The 60 dB DNL standard is not applicable to aircraft overflight noise or traffic noise from elevated roadways.

- For single-family residential uses, the 60 dB DNL standard is applied to private outdoor activity areas, such as backyards.

- CEQA increases allowed are: less than 5 dB where the noise exposure remains Normally Acceptable; less than 3 dB where the noise exposure equals or exceeds the Normally Acceptable level.

- New non-residential land use project-generated noise exposures are limited to 55 dB DNL at the property line when adjacent to noise sensitive residential or public land uses.

- The City's standard for interior noise levels in residences, hotels, motels, residential care facilities and hospitals is 45 dB DNL.

2. Terminology

A. Statistical Noise Levels

Due to the fluctuating character of urban traffic noise, statistical procedures are needed to provide an adequate description of the environment. A series of statistical descriptors have been developed which represent the noise levels exceeded a given percentage of the time. These descriptors are obtained by direct readout of the Sound Level Meters and Noise Analyzers. Some of the statistical levels used to describe community noise are defined as follows:

L_1 - A noise level exceeded for 1% of the time.

L_{10} - A noise level exceeded for 10% of the time, considered to be an "intrusive" level.

L_{50} - The noise level exceeded 50% of the time representing an "average" sound level.

L_{90} - The noise level exceeded 90 % of the time, designated as a "background" noise level.

L_{eq} - The continuous equivalent-energy level is that level of a steady-state noise having the same sound energy as a given time-varying noise. The L_{eq} represents the decibel level of the time-averaged value of sound energy or sound pressure squared and is used to calculate the DNL and CNEL.

B. Day-Night Level (DNL)

Noise levels utilized in the standards are described in terms of the Day-Night Level (DNL). The DNL rating is determined by the cumulative noise exposures occurring over a 24-hour day in terms of A-Weighted sound energy. The 24-hour day is divided into two subperiods for the DNL index, i.e., the daytime period from 7:00 a.m. to 10:00 p.m., and the nighttime period from 10:00 p.m. to 7:00 a.m. A 10 dB weighting factor is applied (added) to the noise levels occurring during the nighttime period to account for the greater sensitivity of people to noise during these hours. The DNL is calculated from the measured L_{eq} in accordance with the following mathematical formula:

$$DNL = [(L_d+10\log_{10}15) \,\&\, (L_n+10+10\log_{10}9)] - 10\log_{10}24$$

Where:

L_d = L_{eq} for the daytime (7:00 a.m. to 10:00 p.m.)

L_n = L_{eq} for the nighttime (10:00 p.m. to 7:00 a.m.)

24 - indicates the 24-hour period

& - denotes decibel addition.

C. A-Weighted Sound Level

The decibel measure of the sound level utilizing the "A" weighted network of a sound level meter is referred to as "dBA". The "A" weighting is the accepted standard weighting system used when noise is measured and recorded for the purpose of determining total noise levels and conducting statistical analyses of the environment so that the output correlates well with the response of the human ear.

3. Instrumentation

The on-site field measurement data were acquired by the use of one or more of the precision acoustical instruments shown below. The acoustical instrumentation provides a direct readout of the L exceedance statistical levels including the equivalent-energy level (L_{eq}). Input to the meters was provided by a microphone extended to a height of 5 ft. above the ground. The meter conforms to ANSI S1.4 for Type 1 instruments. The "A" weighting network and the "Fast" response setting of the meter were used in conformance with the applicable ISO and IEC standards. All instrumentation was acoustically calibrated before and after field tests to assure accuracy.

Bruel & Kjaer 2231 Precision Integrating Sound Level Meter
Larson Davis LDL 812 Precision Integrating Sound Level Meter
Larson Davis 2900 Real Time Analyzer

APPENDIX C

Noise Measurement Data and Calculation Tables

DNL CALCULATIONS

CLIENT: ABC LEARING MONTESSORI
FILE: 47-006
PROJECT: DAY CARE CENTER
DATE: 1/21-22/2015
SOURCE: EXISTING AMBIENT

LOCATION 1 South Property Line

TIME		10^Leq/10		
7:00 AM	49.5	89125.1		
8:00 AM	59.0	794328.2		
9:00 AM	49.8	95499.3		
10:00 AM	46.9	48977.9		
11:00 AM	49.1	81283.1		
12:00 PM	44.7	29512.1		
1:00 PM	47.2	52480.7		
2:00 PM	45.8	38018.9		
3:00 PM	44.4	27542.3		
4:00 PM	48.0	63095.7		
5:00 PM	46.5	44668.4		
6:00 PM	45.9	38904.5		
7:00 PM	46.2	41686.9		
8:00 PM	44.8	30199.5		
9:00 PM	43.6	22908.7	SUM=	1498231
10:00 PM	40.0	10000.0	Ld=	61.8
11:00 PM	41.3	13489.6		
12:00 AM	36.5	4466.8		
1:00 AM	38.2	6606.9		
2:00 AM	35.0	3162.3		
3:00 AM	34.6	2884.0		
4:00 AM	36.7	4677.4		
5:00 AM	42.9	19498.4		
6:00 AM	47.8	60256.0	SUM=	125041
			Ln=	51.0

Daytime Level= 61.8
Nighttime Level= 61.0
DNL= 51
24-Hour Leq= 48.3

LOCATION 2 East Property Line

TIME	Leq	10^Leq/10		
7:00 AM	48.3	67608.3		
8:00 AM	51.9	154881.7		
9:00 AM	49.2	83176.4		
10:00 AM	47.5	56234.1		
11:00 AM	51.3	134896.3		
12:00 PM	44.7	29512.1		
1:00 PM	48.0	63095.7		
2:00 PM	46.0	39810.7		
3:00 PM	43.4	21877.6		
4:00 PM	47.7	58884.4		
5:00 PM	46.2	41686.9		
6:00 PM	46.6	45708.8		
7:00 PM	47.8	60256.0		
8:00 PM	45.5	35481.3		
9:00 PM	42.5	17782.8	SUM=	910893
10:00 PM	37.6	5754.4	Ld=	59.6
11:00 PM	38.9	7762.5		
12:00 AM	34.8	3020.0		
1:00 AM	35.8	3801.9		
2:00 AM	33.3	2138.0		
3:00 AM	33.1	2041.7		
4:00 AM	34.9	3090.3		
5:00 AM	41.4	13803.8		
6:00 AM	46.3	42658.0	SUM=	84071
		1.0	Ln=	49.2

Daytime Level= 59.6
Nighttime Level= 59.2
DNL= 49
24-Hour Leq= 46.2

LOCATION 3 North Property Line

TIME		10^Leq/10		
7:00 AM	47.7	58884.4		
8:00 AM	49.5	89125.1		
9:00 AM	48.9	77624.7		
10:00 AM	48.6	72443.6		
11:00 AM	52.8	190546.1		
12:00 PM	44.4	27542.3		
1:00 PM	47.0	50118.7		
2:00 PM	45.2	33113.1		
3:00 PM	43.0	19952.6		
4:00 PM	49.6	91201.1		
5:00 PM	48.6	72443.6		
6:00 PM	53.3	213796.2		
7:00 PM	53.1	204173.8		
8:00 PM	49.5	89125.1		
9:00 PM	41.9	15488.2	SUM=	1305579
10:00 PM	37.4	5495.4	Ld=	61.2
11:00 PM	39.5	8912.5		
12:00 AM	33.9	2454.7		
1:00 AM	36.3	4265.8		
2:00 AM	32.9	1949.8		
3:00 AM	31.9	1548.8		
4:00 AM	34.9	3090.3		
5:00 AM	40.3	10715.2		
6:00 AM	45.7	37153.5	SUM=	75586
		1.0	Ld=	48.8

Daytime Level= 61.2
Nighttime Level= 58.8
DNL= 49
24-Hour Leq= 47.6

DNL CALCULATIONS

CLIENT: ABC LEARING MONTESSORI
FILE: 47-006
PROJECT: DAY CARE CENTER
DATE: 1/21-22/2015
SOURCE: PARKING LOT/TRAFFIC

TIME	South PL	10^Leq/10		
7:00 AM		1.0		
8:00 AM	60.0	1000000.0		
9:00 AM		1.0		
10:00 AM	52.0	158489.3		
11:00 AM	52.0	158489.3		
12:00 PM	52.0	158489.3		
1:00 PM	52.0	158489.3		
2:00 PM		1.0		
3:00 PM		1.0		
4:00 PM		1.0		
5:00 PM	59.0	794328.2		
6:00 PM		1.0		
7:00 PM		1.0		
8:00 PM		1.0		
9:00 PM		1.0	SUM=	2428295
10:00 PM		1.0	Ld=	63.9
11:00 PM		1.0		
12:00 AM		1.0		
1:00 AM		1.0		
2:00 AM		1.0		
3:00 AM		1.0		
4:00 AM		1.0		
5:00 AM		1.0		
6:00 AM		1.0	SUM=	9
			Ld=	9.5

Daytime Level=	63.9
Nighttime Level=	19.5
DNL=	**50**
24-Hour Leq=	50.1

DNL CALCULATIONS

CLIENT: ABC LEARING MONTESSORI
FILE: 47-006
PROJECT: DAY CARE CENTER
DATE: 1/21-22/2015
SOURCE: PLAYGROUND NOISE

LOCATION 1 SOUTH PROPERTY LINE

TIME		10^Leq/10		
7:00 AM		1.0		
8:00 AM		1.0		
9:00 AM		1.0		
10:00 AM	63.0	1995262.3		
11:00 AM	60.0	1000000.0		
12:00 PM		1.0		
1:00 PM		1.0		
2:00 PM		1.0		
3:00 PM	63.0	1995262.3		
4:00 PM	60.0	1000000.0		
5:00 PM		1.0		
6:00 PM		1.0		
7:00 PM		1.0		
8:00 PM		1.0		
9:00 PM		1.0	SUM=	5990536
10:00 PM		1.0	Ld=	67.8
11:00 PM		1.0		
12:00 AM		1.0		
1:00 AM		1.0		
2:00 AM		1.0		
3:00 AM		1.0		
4:00 AM		1.0		
5:00 AM		1.0		
6:00 AM		1.0	SUM=	9
		1.0	Ld=	9.5

Daytime Level=	67.8
Nighttime Level=	19.5
DNL=	**54**
24-Hour Leq=	54.0

LOCATION 2 EAST PROPERTY LINE

TIME		10^Leq/10		
7:00 AM		1.0		
8:00 AM		1.0		
9:00 AM		1.0		
10:00 AM	65.0	3162277.7		
11:00 AM	63.0	1995262.3		
12:00 PM		1.0		
1:00 PM		1.0		
2:00 PM		1.0		
3:00 PM	65.0	3162277.7		
4:00 PM	63.0	1995262.3		
5:00 PM		1.0		
6:00 PM		1.0		
7:00 PM		1.0		
8:00 PM		1.0		
9:00 PM		1.0	SUM=	10315091
10:00 PM		1.0	Ld=	70.1
11:00 PM		1.0		
12:00 AM		1.0		
1:00 AM		1.0		
2:00 AM		1.0		
3:00 AM		1.0		
4:00 AM		1.0		
5:00 AM		1.0		
6:00 AM		1.0	SUM=	9
		1.0	Ld=	9.5

Daytime Level=	70.1
Nighttime Level=	19.5
DNL=	**56**
24-Hour Leq=	56.3

LOCATION 3 NORTH PROPERTY LINE

TIME		10^Leq/10		
7:00 AM		1.0		
8:00 AM		1.0		
9:00 AM		1.0		
10:00 AM	68.0	6309573.4		
11:00 AM	66.0	3981071.7		
12:00 PM		1.0		
1:00 PM		1.0		
2:00 PM		1.0		
3:00 PM	68.0	6309573.4		
4:00 PM	66.0	3981071.7		
5:00 PM		1.0		
6:00 PM		1.0		
7:00 PM		1.0		
8:00 PM		1.0		
9:00 PM		1.0	SUM=	20581301
10:00 PM		1.0	Ld=	73.1
11:00 PM		1.0		
12:00 AM		1.0		
1:00 AM		1.0		
2:00 AM		1.0		
3:00 AM		1.0		
4:00 AM		1.0		
5:00 AM		1.0		
6:00 AM		1.0	SUM=	9
		1.0	Ld=	9.5

Daytime Level=	73.1
Nighttime Level=	19.5
DNL=	**59**
24-Hour Leq=	59.3